

**The foundational basis for the development of many Covid-19 vaccines has been the CoV-2 spike glycoprotein, developed in HEK 293 cells.**

*“These expression vectors were used to transiently transfect FreeStyle293F cells (Thermo Fisher) using polyethylenimine.”*

Supplementary Materials for Cryo-EM structure of the 2019-nCoV spike in the prefusion conformation, Published 19 February 2020 on Science First Release DOI: 10.1126/science.abb2507

<https://science.sciencemag.org/content/sci/suppl/2020/02/18/science.abb2507.DC1/abb2507-Wrapp-SM.pdf>

FreeStyle293F cells are human embryonic kidney cells taken from a girl aborted in the Netherlands in 1973.

*“Cell Type: Kidney (Embryonic)”*

Expi293F™ Cells

**Catalog number:** A14527

<https://www.thermofisher.com/order/catalog/product/A14527#/A14527>

*“HEK 293 cells were generated in 1973 by transfection of cultures of normal human embryonic kidney cells with sheared adenovirus 5 DNA in Alex van der Eb’s laboratory in Leiden, the Netherlands.”*

[https://en.wikipedia.org/wiki/HEK\\_293\\_cells](https://en.wikipedia.org/wiki/HEK_293_cells)

Thus any Covid-19 vaccine developed using the SARS-Cov2 spike glycoprotein is an aborted fetal cell vaccine.

This is the list of vaccines that we have followed. Information is updated as we learn more.

**Pfizer – BNT 162b2 – HEK 293 aborted fetal cell line**

Pfizer/BioNTech utilizes the CoV-2 spike glycoprotein, developed in **HEK 293** cells, to pattern synthetic mRNA in the Covid-19 vaccine. The synthetic mRNA vaccine was then tested on HEK 293 cells to validate the product.

***PFIZER AND BIONTECH DOSE FIRST PARTICIPANTS IN THE U.S. AS PART OF GLOBAL COVID-19 MRNA VACCINE DEVELOPMENT PROGRAM***

*Tuesday, May 5, 2020*

*First participants dosed at NYU Grossman School of Medicine and University of Maryland School of Medicine*

*Pfizer and BioNTech ramping up manufacturing capabilities to further increase production capacity in 2020/2021*

*Full press release here: <https://www.businesswire.com/news/home/20200505005474/en/>*

[https://www.pfizer.com/news/press-release/press-release-detail/pfizer\\_and\\_biontech\\_dose\\_first\\_participants\\_in\\_the\\_u\\_s\\_as\\_part\\_of\\_global\\_covid\\_19\\_mrna\\_vaccine\\_development\\_program](https://www.pfizer.com/news/press-release/press-release-detail/pfizer_and_biontech_dose_first_participants_in_the_u_s_as_part_of_global_covid_19_mrna_vaccine_development_program)

***SARS-CoV-2 S Protein Glycosylation***

*Crispin team expressed and purified recombinant SARS-CoV-2 S protein successfully from HEK293F cells.*

<https://www.news-medical.net/whitepaper/20200618/SARS-CoV-2-S-Protein-Glycosylation.aspx>

## **Moderna – HEK 293 aborted fetal cell line.**

Moderna utilizes the CoV-2 spike glycoprotein, utilizes the CoV-2 spike glycoprotein, developed in HEK 293 cells, to pattern synthetic mRNA in the Covid-19 vaccine. The synthetic mRNA vaccine was then tested on HEK 293 cells to validate the product.

### ***An mRNA Vaccine against SARS-CoV-2 — Preliminary Report***

*The candidate vaccine mRNA-1273 is a lipid nanoparticle–encapsulated, nucleoside-modified messenger RNA (mRNA)–based vaccine that encodes the SARS-CoV-2 spike (S) glycoprotein stabilized in its prefusion conformation.”*

<https://www.nejm.org/doi/full/10.1056/NEJMoa2022483>

### ***SARS-CoV-2 S Protein Glycosylation***

*Crispin team expressed and purified recombinant SARS-CoV-2 S protein successfully from HEK293F cells.*

<https://www.news-medical.net/whitepaper/20200618/SARS-CoV-2-S-Protein-Glycosylation.aspx>

### ***SARS-CoV-2 (2019-nCoV) Spike Glycoprotein-S1, HEK293 Recombinant***

***Regulatory status: RUO***

***Type: Recombinant protein***

***Source: HEK293***

**Other names:** *Severe acute respiratory syndrome coronavirus 2 spike glycoprotein S1, 2019 novel coronavirus S1 protein, SARS-CoV-2 S1 subunit, COVID-19*

**Species:** SARS”

<https://www.biovendor.com/sars-cov-2-spike-glycoprotein-s1-hek293-3>

### ***Moderna Ships mRNA Vaccine Against Novel Coronavirus (mRNA-1273) for Phase 1 Study***

*Published: Feb. 24, 2020 at 6:04 p.m. ET*

*“mRNA-1273 delivered from Company’s cGMP facility in 42 days from sequence selection”*

<https://www.marketwatch.com/press-release/moderna-ships-mrna-vaccine-against-novel-coronavirus-mrna-1273-for-phase-1-study-2020-02-24>

### ***Coronavirus vaccine maker Moderna announces plans for phase 2 trial***

*April 28th, 2020 at 10:08 PM*

*“- Moderna, one of the first companies to start clinical trials on humans for a coronavirus vaccine, is looking to move to phase 2.*

*– The mRNA-1273 vaccine candidate will be given to a larger cohort of patients in the second quarter of 2020 if regulators approve the next phase of the trial.*

– Moderna previously said that the vaccine might be ready for emergency use as soon as this fall.”

<https://bgr.com/2020/04/28/coronavirus-vaccine-moderna-mrna-1273-phase-2-coming-soon/>

### **Early results from Moderna coronavirus vaccine trial show participants developed antibodies against the virus**

*By Elizabeth Cohen, Senior Medical Correspondent*

*Updated 12:00 PM ET, Mon May 18, 2020*

*“These early data come from the Phase 1 clinical trial, which typically studies a small number of people and focuses on whether a vaccine is safe and elicits an immune response.*

*The results of the study, which was led by the National Institutes Health, have not been peer reviewed or published in a medical journal.”*

*“The US Food and Drug Administration has cleared the company to begin Phase 2 trials, which typically involve several hundred of people, and Moderna plans to start large-scale clinical trials, known as Phase 3 trials, in July, which typically involve tens of thousands of people. Offit said before the pandemic, vaccine developers would typically test out their product in thousands of people before moving on to Phase 3, but that Moderna is “extremely unlikely” to have vaccinated that many by July, since they’ve only vaccinated dozens so far.”*

*“In the Moderna study, three participants developed fever and other flu-like symptoms when they received the vaccine at a dose of 250 micrograms. Moderna anticipates the Phase 3 study on dosage will be between 25 and 100 micrograms.”*

<https://www.cnn.com/2020/05/18/health/coronavirus-vaccine-moderna-early-results>

Reference: <http://nodeception.org/aborted-fetal-cell-use-in-covid-19-vaccines/>

